

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Fire Damper**with type designation(s)
FGD Dampers

Issued to

Wozair Limited
Gillingham Kent, United Kingdomis found to comply with
DNV GL offshore standards**Application :****Approved for use in ventilation ducts in class H bulkheads and decks.**
The damper satisfies for 120 minutes the requirements to stability and integrity according to chapter II-2, reg. 3 of the SOLAS Amendments 2000.Issued at **Høvik** on **2017-10-03**This Certificate is valid until **2022-10-02**.DNV GL local station: **London**for **DNV GL**Approval Engineer: **Helge Bjørnara**

Mårten Schei-Nilsson
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

"FGD Damper"

A single- or multi-bladed fire damper with a spring powered operating system triggered to close automatic by a temperature sensing device.

Damper blades are made from two layers of 1.5 mm thick mild steel with a mild steel bar, of diameter 19 mm, in between as blade shaft.

The fire damper casing is 300 mm long with 50 mm flanges and made from 3 mm thick mild steel. The casing may be made with stainless steel (*see application/ limitation below).

The fire damper is flanged to the coaming by means of nuts and bolts of minimum diameter 10 mm at a maximum spacing of 150 mm apart, and the coaming is fully welded to the bulkhead plate.

The fire dampers can be manufactured at the following locations:

- Wozair Ltd., Gillingham, UK
- Nam Hoe Metal Industries Pte. Ltd., Singapore
- Mechtamatic Manufacturing (M) Sdn. Bhd., Johor, Malaysia
- Wozair (USA) Ltd, Conroe, Texas, USA
- SAE-A HVAC IND, Gyeongju, Korea

For further details, see the below Application/Limitation and Type Approval documentation.

Application/Limitation

The arrangement of the fire damper and necessary insulation of damper frame and ducting in the vicinity of the partition is subject to approval in each case.

Min. size of damper: 150 x 150 mm (W x H)
Max. size of damper: 1200 x 1200 mm (W x H)
Max. blade height: 300 mm
Max. blade width: 1200 mm
Max. number of blades: 4

Multiple damper assemblies fitted by means of transoms and/or mullions with a maximum configuration of 2 units high by 3 units wide, with each module having internal dimensions up to 1200 x 1200 mm, may be used. The transoms and mullions are to be welded to the casing perimeter.

In both cases of increased damper size or combined dampers a damper shaft interlock is to be mounted, to ensure the uniform and simultaneous actuation of adjacent damper blades.

*Steel thickness of damper casing to be equal to or greater than thickness of duct/sleeve required by the rules if the damper casing is part of the duct/sleeve.

Each product is to be supplied with its manual for installation, use and maintenance.

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, October 2015.

Test report No. 132889 dated 23rd October 2003 Warrington FRC, Warrington, UK
Test report No. 132886 dated 24th October 2003 Warrington FRC, Warrington, UK
Assessment report No. 138538 dated 13th April 2004 from Warrington FRC, Warrington, UK

Drawing No. 870.2092, Rev. 0, dated 25th July 2003 from manufacturer.
Drawing No. 870.2093, rev. 0, dated 25th July 2003 from manufacturer.

Tests carried out



Job Id: **262.1-002357-13**
Certificate No: **TAF00000RH**

Tested according to IMO FTPC Part 3 and with the hydrocarbon time-temperature curve specified in ISO 834-3.

Marking of product

The product is to be marked with name of manufacturer, type designation and fire-technical rating.

Periodical assessment

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Class Programme DNVGL-CP-0338, Section 4.